Technical Memorandum No. 9
Preliminary Design Report

Widening of the Garden State Parkway
Interchange 30 to Interchange 80

Contract 133-572D

Prepared for:
The New Jersey
Highway Authority

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Introduction

The New Jersey Highway Authority is proposing to widen the Garden State Parkway between Interchange 80 in Toms River and Interchange 30 in Somers Point. Except for a handful of locations, the proposed project will take place within the existing right-of-way of this 50 mile project. This portion of the Garden State Parkway runs through Ocean County, Burlington County and Atlantic County which includes 14 municipalities comprised of: South Toms River Borough, Berkley Township, Beachwood Borough, Lacey Township, Barnegat Township, Stafford Township, Ocean Township, Eagleswood Township, Little Egg Harbor Township, Bass River Township, City of Port Republic, Galloway Township, Egg Harbor Township and the City of Somers Point.

The New Jersey Highway Authority anticipates the addition of one lane to each roadway (northbound and southbound) and increased shoulder width. During the initial project planning stages and site reconnaissance, several environmental constraints were encountered. As a result, the project team as well as the applicant analyzed these constraints to determine the most feasible design scheme to preserve and protect these environmentally sensitive areas. Based on these compelling factors, the proposed roadway widening will take place within the median wherever possible, as well as the outer portion of the roadway where appropriate. In certain areas, the roadway alignment may be shifted in order to promote safe vehicular circulation and to minimize severe environmental impacts.

The New Jersey Highway Authority design philosophy is to design and build this roadway widening with minimal environmental disturbance while constructing a viable, feasible and aesthetically appealing project blending in with the existing character of the surrounding environment. In order to achieve this goal, the project team thoroughly evaluated alternative designs and configurations relative to the overall impacts of the project. The project configuration represents the most environmentally sensitive design, which promotes vehicular safety, minimal disruption of the travelling public and minimal disruption of the quality of life of the residential communities adjacent to the project. The proposed project, however, has certain irreversible and unavoidable impacts. The project team identified these impacts and where feasible, mitigation measures have been incorporated into the development plans.

This technical memorandum addresses the minimum design criteria pertaining to the layout of the roadway elements associated with the proposed widening. The justification for elements which must be designed in violation of this minimum criteria is also addressed. The controlling design elements considered are:

- Cross Slope
- Lane and Shoulder Width
- Minimum Radius (mainline and interchange ramps)
- Grades (maximum and minimum)
- Stopping Sight Distance
- Superelevation (mainline and ramps)
- Auxiliary lane length (interchange only)

The required design values for the controlling design elements are contained in the following design standards:

- New Jersey Highway Authority – Garden State Parkway Design Manual, 1989
- NJDOT Design Manual Roadway, 1995
- NJDOT Design Manual Bridges and Structures, 1995

- AASHTO publication A Policy on Geometric Design of Highways and Streets, 1994
- AASHTO publication Geometric Design Guide for Resurfacing, Restoration, and Rehabilitation (R-R-R) of Highways and Streets, 1977

The typical sections have been developed to address the most obvious alternatives to minimizing environmental impacts. Further modification of these sections may be required as agency and public input is received.

Project Description

The widening of the Garden State Parkway from Interchange 30 to 80 spans over a distance of approximately 51 miles. For a majority of its length, the Parkway is a divided arterial roadway separated by a variable width median. The scope of the project consists of constructing a third lane and increasing shoulder widths on both the northbound and southbound roadways. To accommodate the roadway improvements will require the replacement or widening of approximately 78 bridges and box culverts in addition to numerous pipe culverts. The design speed utilized for this project for both mainline and overpass roadways is the posted speed plus 5 mph.

Existing Conditions

In areas where a wide median is present, the existing northbound and southbound roadway widths are each 40 ft. and consist of a 6 ft. left shoulder, two (2) 12 ft. lanes and a 10 ft. right shoulder. In areas where no median exists, the roadways are 44 ft. wide separated by either guide rail or concrete barrier curb with the additional width accounted for in a 10 ft. left shoulder along the median.

The pavement type constructed throughout this portion of the Parkway is bituminous. The original pavement section in order from bottom to top layer consists of a 6 in. Subbase, a 3 in. Road Mix Base Course, a 3 in. Hot Mix Sand-Gravel Base Course, and a 1 ½ in. Fine Aggregate Bituminous Surface course. As-built plan information indicates the original shoulders consisted of 6 in. Road Gravel. It is apparent at some point in time the shoulder pavement was upgraded to a bituminous pavement section. Based upon information obtained from the Authority, the existing pavement has received two (2) 2 in. Surface Course Overlays between M.P. 30 and 52 and one (1) 2 in. Surface Course Overlay between M.P. 52 to 80.

The original construction utilized superelevation of the roadway in areas where baseline curves are less than 6000 ft. Superelevation rates vary from 1% for curve radii between 4,500 ft and 6,000 ft. up to 2.8 % for a curve radius of 3,400 ft. Table 1 (See Appendix A) shows the superelevation rates used during original construction. Shoulder pavement cross slopes are 4% and variable. Lane cross slopes of 1% were constructed in normal sections (radii greater than 6000 ft.).

Proposed Conditions

General

The intent of this project is to provide for additional mainline roadway capacity by constructing a third lane in each direction of traffic flow while carefully considering the impacts of the widening on the surrounding environment. To achieve this end, it is practical to maintain, as closely as possible, the horizontal and vertical alignments of the existing mainline roadway. To improve vertical grades and horizontal curvature to current AASHTO standards would require the roadway to be completely reconstructed. Satisfying these criteria would not be cost effective and cause major impacts to the surrounding environment. Therefore, minimum radius, grades and stopping sight distance criteria will not be improved to current standards for the mainline roadway as part of the scope of work for this project (A list of remaining substandard features is provided later in this report). Profile information will be provided at locations where significant changes in roadway elevations occur. Horizontal realignment of the roadway is considered only to minimize environmental impacts.

Mainline Roadway

The proposed roadway half section contains a width of 58 ft. including a 10 ft. left shoulder, three (3) 12 ft. lanes and a 12 ft. right shoulder. The width is 2 ft. greater on mainline bridges due to a 12 ft. left shoulder being employed. The proposed lane and shoulder widths are the desired minimum required based upon NJDOT criteria for freeway design concerning truck traffic volume and driver safety considerations.

The proposed roadway widening will be constructed with bituminous pavement. For cost estimating purposes, the pavement section was assumed to consist of a 3 in. Bituminous Concrete Surface Course, Mix I-4, 5 in. Bituminous Stabilized Base Course, Mix I-2, 8 in. Dense Graded Aggregate Base Course and 6 in. minimum Subbase layer. The subbase layer varies in thickness to match the bottom of the existing subbase layer to prevent the entrapment of water under the pavement box.

The layout of the roadway widening is initially controlled by one basic element; median width. The median is generally wide, greater than 100 ft., throughout the entire project except between the following milepost limits:

- M.P. 30.6 – M.P. 31.4
- M.P. 35.7 – M.P. 37.0
- M.P. 39.5 – M.P. 40.3
- M.P. 47.6 – M.P. 52.2

Figures 1 – 6 (See Appendix B) are the Typical Sections developed for this project. Figures 1 through 5 address the mainline roadway and Figure 6 addresses overpass roadways. Each figure addresses normal and superelevated pavement sections. The sections can be associated to median type. Figures 1 through 3 are applicable in wide median areas. Figure 1 shows widening to the inside or median. Figure 2 shows widening to the outside away from the median. Figure 3 covers various alignments between the inside and outside widening options. Figures 4 and 5 are valid in narrow median areas. Figure 4 shows a symmetrical outside widening. Figure 5 shows an unsymmetrical widening to the east of the existing roadway. Tables 4 and 5 (See Appendix A) indicate for the northbound and southbound roadways, respectively, the type of section implemented by existing milepost for the Preferred Alignment.

In developing the Typical Sections for the Preferred Alignment, consideration was given to the potential environmental impacts associated with the roadway widening. Where possible roadway widening and proposed drainage infrastructure will occur on the same side of the roadway. This approach maximizes the amount of undisturbed areas. A 2 in. minimum and variable depth overlay will be applied to the existing pavement. This overlay has a fourfold benefit to the existing roadway by accommodating the necessary shift in the existing crown line location, providing additional strength to the existing pavement section, affording a uniform appearance to the entire roadway width following construction and accommodating the increase in the existing lane cross slopes from 1% to the current acceptable minimum standard of 1.5% in normal sections. Milling and resurfacing operations were investigated and found to provide no cost benefit compared to the overlay treatment in addition to adding no strength to the existing pavement. Environmental impacts caused by the overlay treatment are negligible.

An analysis of the existing superelevation rates was performed to evaluate the reasonableness of improvements to the rates in light of impacts to the surrounding environment. Given the constraints imposed by the scope of the project, i.e. environmental, existing horizontal and vertical alignments, it was deemed reasonable to utilize the AASHTO publication Geometric Design Guide for Resurfacing, Restoration, and Rehabilitation (R-R-R) of Highways and Streets, 1977 to conduct the analysis of the existing superelevation rates. The design criteria presented in this publication allow for flexibility in order to adjust to actual field conditions. This criteria was developed to address the needed balance between social, environmental and economic costs and improved service to the traveling public.

The analysis of the existing superelevation rates involves assessing combinations of radius of curvature, speed and superelevation which result in a ball bank indicator reading of 10 degrees. This reading is generally used for determining the maximum safe speed on horizontal curves and the widely accepted limit at which riding discomfort due to centrifugal force is evident to the driver. A summary of the curve locations, existing, proposed and design standard superelevation rates along with posted and safe speeds are shown in Tables 2 and 3 for the northbound and southbound roadways, respectively. The result of the analysis shows no increase in the existing superelevation rates to current standards is necessary to achieve a safe speed of 70 mph. Existing 1% superelevation rates will be increased to the current minimum standard of 1.5%. This increase in rate will have minimal if any impact on the surrounding environment.

In areas where a wide median exists, the proposed roadway widening will be constructed in the median to minimize right of way impacts. Figure 1 shows the widened pavement section for both normal and superelevated cross slopes. Minimization of environmental impacts can be achieved by decreasing the impact of the proposed side slopes alone or in combination with decreasing the impact associated with the increase in pavement width.

Slope impacts are reduced by either increasing the side slope or constructing a retaining wall. The slope table in Figure 1 indicates increasing slopes with incremental increases in fill height. It should be noted that berm width abruptly increases from 3 ft. to 7 ft. for fill heights greater than 10 ft and fill slopes of 2:1. This is to accommodate guide rail installations. In environmentally sensitive areas in addition to employing steep side slopes up to 1½:1, the implementation of retaining walls may also be considered.

Reducing pavement impacts are possible through several horizontal realignment options away from environmentally sensitive areas as illustrated by Figures 2, 3 and 5. Figure 2 can be utilized in areas where the median is wide. This option entails holding the edge of the left shoulder line and applying a variable overlay treatment. Figure 3 ranges from a minimum 4 ft. inside widening with a 14 ft. outside widening to a maximum 18 ft. inside widening and no outside widening. The 4 ft. inside widening section maintains the location of the existing crown line through widening of the existing left shoulder

from 6 ft. to 10 ft. The typical section shown in Figure 5 can be utilized at locations where the median is narrow and shows a widening occurring all to the east of the roadway. The appropriateness of the section utilized will depend upon the type and location of the environmental constraints. There is also the potential to minimize environmental impacts through the reduction of shoulder widths. Absolute minimum shoulder widths of 7 ft. and 10 ft. can be considered for left and right shoulders, respectively, however, safety issues do become a factor when considering these minimum values.

Interchange / Service Area Ramps

In areas where widening impacts interchange acceleration / deceleration lanes, a 12 ft. auxiliary lane in conjunction with a 12 ft. right shoulder will be implemented. A reduction of the shoulder width to 10 ft. will be employed to minimize environmental and economic impacts. The lane cross slope will generally be 0.5% greater than the immediately adjacent mainline travel lane.

At locations where interchange or service area ramps are impacted, the length of the existing accel / decel lane will be examined for adequacy to current NJHA and NJDOT design standards. The auxiliary lane length will be increased to meet current acceptable minimum design criteria barring unacceptable impacts to the environment. Substandard features, whether required due to environmental constraints or which remain as a condition after the mainline widening, will be listed later in this report under the section Remaining Substandard Features.

Where conditions require the partial or full realignment of an interchange ramp, NJDOT design criteria pertaining to ramp width, horizontal and vertical alignments, superelevation and maximum grade will be implemented to the fullest extent possible in light of existing physical and environmental constraints. Minimum design speeds will range from 25 mph for loop ramps up to 35 mph for outer direct connections at cloverleaf interchanges. Proposed ramp design elements which do not meet current design standards will be properly justified and documented. In no case will existing design elements be reduced.

Overpass Roadways

Overpass roadways traverse the Parkway via one bridge structure in areas where the median is narrow and two bridge structures in areas where the median is wide. Bridge structures will be replaced due to the widening of the mainline roadway and raised to meet the minimum required vertical underclearance of 16’-6”. Minimum NJDOT lateral bridge clearances will be provided. In the case of stub abutments, the lateral clearance will be no less than 30 ft. A lateral clearance of 4.75 ft. adjacent to full height abutments and piers will be maintained. Similar to the mainline roadway, the design speed will be the posted speed plus 5 mph.

Bi-directional overpass roadways will consist of two (2) 12 ft. lanes and two (2) 12 ft. shoulders. The shoulder widths on approach will transition to existing widths on either side of the overpasses. The shoulder transition length will be designed to provide sufficient length needed for traffic control and staging purposes.

The replacement of the existing structures necessitates an analysis of the stopping sight distance of the existing crest curves. A summary of existing and design standard lengths of vertical curves and K values along with posted, design and safe speeds are shown in Table 6. Vertical curves will be improved where possible and in no case will the existing stopping sight distance or overpass roadways be reduced for the

replacement structures. Substandard features related to overpass roadways are included in the following section of this report.

Remaining Substandard Features

The following is a list of design elements not meeting the minimum design criteria described in this memorandum based upon NJDOT and New Jersey Highway Authority standards:

- At Interchange 38, the proposed southbound left shoulder width at the Atlantic City Expressway pier location will be 4.75 ft. The minimum of 10 ft. can not be attained without impact to the overpass structure.

- There are currently minimal northbound or southbound deceleration lanes at Interchange 58, as the ramps exit directly off the mainline. The northbound and southbound acceleration lanes do not meet current Parkway design standards specifying a desirable length of 900'. No improvements are proposed at the northbound and southbound acceleration and deceleration lanes since there is no proposed outside widening in the vicinity of these lanes.

- There are currently minimal northbound or southbound deceleration lanes at Interchange 63. The existing northbound and southbound acceleration lanes do not meet current design standards for accel. lane lengths. No improvements are proposed due to full inside mainline widening at the interchange. These deficiencies will be addressed as part of the improvements planned for this interchange.

- The northbound accel. lane and southbound decel. lane at Interchange 67 do not meet current Parkway design standards specifying a desirable length of 900'. No improvements are proposed due to full inside mainline widening at the interchange. These deficiencies can be addressed as part of the improvements planned for this interchange.

- At Interchange 69, the profile of the proposed Waretown Road (C.R. 532) overpass meets a design speed of 50 mph for both sag and crest vertical curves. This is equivalent to the current posted speed. Design of the crest curve to meet 55 mph (posted speed + 5 mph) would require excessive impacts to the surrounding area, and greatly increased construction cost.

- At the Stafford Forge picnic area, the grassed island areas are greatly reduced at ingress / egress ramps due to northbound and southbound mainline widening to the inside.

- To minimize wetlands impacts, a 180 ft. taper (NJDOT) is employed and the northbound deceleration lane at Oyster Creek Picnic Area is limited to an 850 ft. length not utilizing the off ramp or a 1,050 ft. length utilizing the remaining portion of the proposed off ramp to the stop condition. New Jersey Department of Transportation (NJDOT) criteria suggests 615 ft. for 70 mph mainline design speed with a stop condition on the ramp. The mainline design speed easily exceeds 70 mph under NJDOT criteria whether utilizing or not the available ramp length to the stop condition. However, the provided deceleration length to the ramp nose is slightly less than the New Jersey Highway Authority (NJHA) minimum criteria of 900 ft. This recommendation will avoid lengthening of the culvert structure and in turn minimize required wetlands impacts.

- To minimize wetlands impacts, the southbound acceleration lane at Oyster Creek Picnic Area is limited to 950 ft. length to the nose of the proposed ramp. NJDOT criteria suggests 1590 ft. for 70

mph mainline speed and a stop condition on the ramp. The length provided correlates to a 55 mph mainline design speed. An acceleration lane length of 1,300 ft. is obtained including the available ramp length. Either proposed length exceeds NJHA minimum acceleration lane length criteria of 900 ft. and the higher length correlates to a 62 mph mainline design speed using NJDOT criteria. This recommendation will minimize lengthening of the culvert structure and in turn minimize required wetlands impacts.

- To minimize wetlands impacts, the northbound acceleration lane at Oyster Creek Picnic Area is limited to a 955 ft. length to the nose of the proposed ramp or an 1,100 ft length utilizing the entire ramp. NJDOT criteria suggest 1590 ft. for 70 mph mainline design speed and stop condition on ramp. Length provided, not utilizing the ramp, correlates to a mainline design speed of 55 mph with a stop condition imposed on the ramp. The mainline design speed increases to 58 mph utilizing the available ramp length under the same stop condition criteria. Either proposed length exceeds the NJHA minimum acceleration lane length criteria of 900 ft. This recommendation will minimize mainline widening and thus minimize required wetlands impacts.

- The southbound acceleration lane at Interchange 74 does not meet current Parkway design standards specifying a desirable length of 900 ft. The length of the acceleration lane to the physical nose of the ramp is approximately 620 ft. Based upon NJDOT design criteria and a minimum ramp radius of 350 ft., 760 ft. of acceleration length is available corresponding to a mainline design speed of 59 mph. No improvements are proposed due to full inside mainline widening at this location.

- Superelevation rates along the mainline will not meet current standards. However, all existing horizontal curves meet or exceed safe speed requirements based on the AASHTO safe speed formula for a 70 mph design speed.

- The lengths of vertical curves along the mainline roadway are sub-standard due to changes in design standards and in the posted speed along the Parkway. For a 70 mph design speed, the current minimum “K” values of 290 for crest curves and 150 for sag curves are not met for a significant number of curves. Most of these vertical curves support design speeds no greater than 60 mph based on current NJDOT standards. To minimize overlay and ultimately fill in environmentally sensitive areas, the existing profile was maintained.

- In some instances, the profile gradients on the mainline are 0%. According to current standards, the minimum acceptable value is 0.30% unless there are extenuating circumstances in umbrella sections. As previously mentioned, to minimize overlay and ultimately fill in environmentally sensitive areas, the existing profile was maintained.

APPENDIX A

TABLE 1
Mainline Superelevation Rates

Original G.S.P. Superelevation Rates

Radius	"e"
3,400	2.8%
3,500	2.8%
3,600	2.6%
3,800	2.4%
4,000	2.2%
4,500	1.8%
4,500-6,000	1.0%
> 6,000	N.C.

Desirable Superelevation Rates - NJDOT Roadway Manual Fig. 4-B (D.S. = 70 mph)

Radius	"e"
2,000	6.0%
2,500	5.8%
3,000	5.3%
3,500	4.9%
4,000	4.4%
4,500	4.1%
5,000	3.7%
6,000	3.2%
7,000	2.8%
8,000	2.5%
9,000	2.3%
10,000	2.1%
12,000	1.7%
14,000	1.5%
16,000	N.C.

TABLE 2

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - NORTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
29.56	30.17	2258+69	2290+83	3.2%	1.5%	1.0%	6000	86	90	65	3,214
30.28	30.90	2305+85	2329+42	3.5%	1.5%	1.0%	5500	84	89	65	2,357
31.05	31.36	2336+38	2353+89	3.0%	Normal -2.0%	Normal -1.0%	6500	78	92	65	1,751
31.70	31.99	2371+39	2387+08	3.2%	1.5%	1.0%	6000	86	90	65	1,569
32.13	32.51	2394+23	2414+44	3.7%	1.5%	1.0%	5000	82	87	65	2,021
32.65	33.54	2431+25	2468+59	2.7%	Normal -1.5%	Normal -1.0%	7200	82	93	65	3,734
33.84	34.17	2484+79	2502+19	3.7%	1.5%	1.0%	5000	82	87	65	1,740
34.43	34.55	2515+91	2522+03bk 2523+36ah	Normal -2.0%	Normal -1.5%	Normal -1.0%	15000	93	91	65	612
34.69	34.93	2530+65	2543+62	4.4%	2.2%	2.2%	4000	79	84	65	1,297
35.12	35.76	2553+73	2587+05	2.1%	Normal -1.5%	Normal -1.0%	10000	87	98	65	3,332
36.30	36.48	2615+64	2625+10bk 2625+00ah	4.4%	2.2%	2.2%	4046	79	84	65	946
36.65	37.27	2634+31	2666+82	Normal -2.0%	Normal -2.0%	Normal -1.0%	15000	91	91	65	3,251
37.27	37.84	2666+82	2696+93	Normal -2.0%	Normal -2.0%	Normal -1.0%	52130	103	103	65	3,011
38.16	39.14	2714+17	2765+89	2.1%	Normal -1.5%	Normal -1.0%	10000	87	98	65	5,172
39.55	39.80	2787+24	2800+61bk 2800+48ah	4.8%	2.6%	2.6%	3600	77	82	65	1,337
40.21	40.37	2822+11	2830+49bk 5850+89ah	4.4%	2.2%	2.2%	4000	79	84	65	838

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Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
40.49	40.63	5857+39	5864+77	4.2%	2.0%	2.0%	4294	80	85	65	738
40.78	40.97	5872+49	5882+48	Normal -2.0%	Normal -2.0%	Normal -1.0%	31373	99	99	65	999
41.09	41.43	5889+01	5906+98	1.5%	Normal -1.5%	Normal -1.0%	13873	92	102	65	1,797
41.85	42.30	5929+00	5952+78	2.5%	Normal -2.0%	Normal -1.0%	7177	80	93	65	2,378
42.38	42.78	5956+89	5978+36	2.0%	Normal -1.5%	Normal -1.0%	10695	88	99	65	2,147
42.78	43.17	5978+36	5998+66	3.4%	1.5%	1.0%	5625	85	89	65	2,030
43.17	43.38	5998+66	6010+06	2.3%	Normal -1.5%	Normal -1.0%	9264	86	97	65	1,140
43.38	43.69	6010+06	6026+13	1.6%	Normal -1.5%	Normal -1.0%	12856	91	101	65	1,607
43.87	44.19	6035+52	6052+63	2.8%	Normal -2.0%	Normal -1.0%	6916	80	93	65	1,711
44.33	44.59	6060+22	6073+47	2.3%	Normal -2.0%	Normal -1.0%	9069	84	97	65	1,325
44.59	45.14	6073+47	6102+60	3.9%	1.5%	1.0%	4734	81	87	65	2,913
45.14	45.47	6102+60	6120+28	3.2%	Normal -2.0%	Normal -1.0%	6028	77	91	65	1,768
45.57	45.87	6125+45	6141+22	2.1%	Normal -1.5%	Normal -1.0%	9829	87	98	65	1,577
45.97	46.26	6146+71	6161+65	2.8%	Normal -1.5%	Normal -1.0%	7058	81	93	65	1,494
46.41	46.56	6169+93	6177+73	3.0%	Normal -2.0%	Normal -1.0%	6567	79	92	65	780
46.70	47.00	6185+24	6201+02	3.4%	1.5%	1.0%	5544	85	89	65	1,578

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SUPERELEVATION TABULATION - NORTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
47.00	47.21	6201+02	6212+04	2.2%	Normal -2.0%	Normal -1.0%	9701	85	98	65	1,102
47.21	47.42	6212+04	6223+23	1.7%	Normal -2.0%	Normal -1.0%	12481	89	101	65	1,119
47.56	47.78	6230+42	6242+01	3.6%	1.5%	1.0%	5221	83	88	65	1,159
47.78	48.21	6242+01	6264+88	4.8%	2.5%	2.5%	3720	78	83	65	2,287
48.21	48.44	6264+88	6277+00	4.2%	1.9%	1.9%	4324	80	85	65	1,212
48.56	48.79	6283+33	6295+71	4.9%	2.7%	2.7%	3548	77	82	65	1,238
49.11	49.65	6312+12	6340+92	4.1%	1.8%	1.8%	4455	81	86	65	2,880
49.90	50.20	6354+09	6370+10	2.9%	Normal -1.5%	Normal -1.0%	6705	80	92	65	1,601
50.27	50.60	6373+79	6391+16	Normal -1.5%	Normal -1.5%	Normal -1.0%	20499	97	97	65	1,737
50.60	50.66	6391+16	6397+04	4.4%	2.2%	2.2%	4059	79	84	65	588
50.66	51.06	6397+04	6415+14	4.7%	2.5%	2.5%	3672	78	82	65	1,810
51.15	51.31	6420+30	6428+37	4.6%	2.4%	2.4%	3804	78	83	65	807
51.51	51.66	6438+94	6446+94	Normal -1.5%	Normal -1.5%	Normal -1.0%	20867	97	97	65	800
52.05	52.32	6467+82	6481+75	2.8%	Normal -1.5%	Normal -1.0%	7159	82	93	65	1,393
52.49	52.80	6491+08	6507+04	2.2%	Normal -2.0%	Normal -1.0%	9721	85	98	65	1,596
52.96	53.14	6515+42	6524+92 bk 28+25 ah	Normal -2.0%	Normal -2.0%	Normal -1.0%	17410	93	93	65	950

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Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
53.38	53.53	40+86	48+53	5.3%	2.8%	2.8%	3012	74	78	65	760
53.80	53.88	62+90	67+05bk 6563+32ah	3.7%	1.5%	1.0%	4991	82	87	65	415
53.87	54.24	6563+32	6582+76	1.6%	Normal -2.0%	Normal -1.0%	12,878	89	101	65	1,943
54.44	54.66	6593+39	6604+92	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	1,153
54.66	54.84	6604+92	6614+63	4.1%	2.0%	2.0%	4,404	81	85	65	970
55.02	55.22	6624+24	6634+75	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,051
55.44	55.84	6645+95	6666+98	1.6%	Normal -1.5%	Normal -1.0%	13,000	91	102	65	2,102
56.07	56.40	6679+41	6697+31	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,759
56.59	56.74	6707+09	6714+90	1.9%	Normal -1.5%	Normal -1.0%	11,000	89	99	65	780
56.74	56.93	6714+90	6725+40	4.4%	2.2%	2.2%	3,963	79	83	65	1,050
57.13	57.38	6735+34	6748+71	4.1%	1.8%	1.8%	4,500	81	86	65	1,336
57.58	57.80	6758+99	6770+72	1.9%	Normal -1.5%	Normal -1.0%	11,000	89	99	65	1,173
57.80	58.02	6770+72	6782+44	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,322	97	97	65	1,171
58.33	58.86	6799+03	6826+79	2.4%	Normal -2.0%	Normal -1.0%	8,558	83	96	65	2,775
59.01	59.34	6834+95	6852+25	3.1%	Normal -1.5%	Normal -1.0%	6,369	79	92	65	1,729
59.55	59.78	6863+39	6875+45 Bk. 6883+37 Ah.	1.9%	Normal -2.0%	Normal -1.0%	11,286	87	100	65	1,206

TABLE 2

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - NORTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
60.01	60.23	6895+72	6907+43	2.8%	Normal -1.5%	Normal -1.0%	6949	81	93	65	1,170
60.23	60.56	6907+43	6925+08	4.4%	2.2%	2.2%	4,000	79	84	65	1,765
60.77	61.10	6935+57	6953+18	3.2%	1.5%	1.0%	6,000	86	90	65	1,760
61.35	61.91	6965+72	6995+53	2.3%	Normal -1.5%	Normal -1.0%	9,000	85	97	65	2,980
62.09	62.50	7005+34	7026+91	1.6%	Normal -2.0%	Normal -1.0%	13,000	89	102	65	2,156
62.50	62.78	7026+91	7041+46	Normal -2.0%	Normal -2.0%	Normal -1.0%	30,000	99	99	65	1,454
62.78	63.04	7041+46	7055+06	Normal -2.0%	Normal -2.0%	Normal -1.0%	20,000	95	95	65	1,360
63.21	63.41	7064+63	7075+27	2.5%	Normal -1.5%	Normal -1.0%	8,000	83	95	65	1,063
63.61	63.93	7085+74	7102+48	1.9%	Normal -2.0%	Normal -1.0%	11,000	87	99	65	1,673
64.10	64.32	7111+42	7122+90	3.0%	Normal -1.5%	Normal -1.0%	6,500	80	92	65	1,147
64.50	64.67	7132+61	7141+49	2.8%	Normal -2.0%	Normal -1.0%	7,000	80	93	65	887
64.85	65.33	7150+86	7176+09	1.9%	Normal -1.5%	Normal -1.0%	11,000	89	99	65	2,522
65.54	65.81	7187+23	7201+34	Normal -2.0%	Normal -2.0%	Normal -1.0%	20,000	95	95	65	1,411
65.81	66.04	7201+34	7213+90	1.6%	Normal -2.0%	Normal -1.0%	13,000	89	102	65	1,255
66.24	66.62	7224+21	7244+53	3.5%	1.5%	1.0%	5,500	84	89	65	2,032
66.80	67.07	7253+96	7268+23	2.8%	Normal -2.0%	Normal -1.0%	7,000	80	93	65	1,426

TABLE 2

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - NORTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
67.28	67.54	7279+13	7292+85	2.1%	Normal -1.5%	Normal -1.0%	10000	87	98	65	1,372
67.54	67.77	7292+85	7305+19	2.8%	Normal -1.5%	Normal -1.0%	7,000	81	93	65	1,233
68.02	68.28	7318+15	7331+93	4.1%	1.8%	1.8%	4,500	81	86	65	1,377
69.26	69.46	7386+10	7394+39	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,061
69.46	70.11	7394+39	7428+77	Normal -2.0%	Normal -2.0%	Normal -1.0%	20,000	95	95	65	3,437
70.45	70.65	7446+66	7457+45	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	1,079
70.65	71.21	7457+45	7487+27	1.7%	Normal -1.5%	Normal -1.0%	12,000	90	100	65	2,982
71.49	71.74	7501+75	7515+04	2.8%	Normal -2.0%	Normal -1.0%	7,000	80	93	65	1,329
71.94	72.25	7525+25	7541+62	3.0%	Normal -1.5%	Normal -1.0%	6,500	80	92	65	1,636
72.43	72.56	7551+14	7557+98	3.0%	Normal -2.0%	Normal -1.0%	6,500	78	92	65	684
72.56	72.85	7557+98	7573+62	Normal -2.0%	Normal -2.0%	Normal -1.0%	18,000	94	94	65	1,564
73.04	73.27	7583+43	7595+48	2.5%	Normal -1.5%	Normal -1.0%	8,000	83	95	65	1,205
73.55	73.87	7610+36	7627+34	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	1,698
74.36	75.21	7653+40	7698+11	1.7%	Normal -2.0%	Normal -1.0%	12,000	88	100	65	4,471
75.64	75.74	7720+79	7726+00	2.1%	Normal -2.0%	Normal -1.0%	10,000	86	98	65	521
75.82	76.19	7730+60	7750+14	2.1%	Normal -1.5%	Normal -1.0%	10,000	87	98	65	1,953

TABLE 2

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - NORTHBOUND

Location				"e" max	"e"	"e"	Radius	Safe Speed		Posted	Curve
Milepost		Station		Des. Std.	Proposed	Existing	Ex. & Prop.	V (Prop.)	V (Stand.)	Speed	Length
Start	End	Start	End	(NJDOT)			(ft)	(mph)	(mph)	(mph)	(ft)
76.19	76.31	7750+14	7756+65	3.2%	Normal -1.5%	Normal -1.0%	6914	81	94	65	651
76.61	76.71	7772+16	7777+27	1.5%	Normal -1.5%	Normal -1.0%	14,240	92	103	65	510
76.71	76.96	7777+27	7790+44	2.3%	Normal -1.5%	Normal -1.0%	9,240	86	97	65	1,317
77.17	77.40	7801+35	7816+27	2.1%	Normal -2.0%	Normal -1.0%	9,760	85	98	65	1,192
77.63	78.10	7825+58	7850+51	Normal -1.5%	Normal -1.5%	Normal -1.0%	18,000	96	96	65	2,492
78.27	78.97	7859+47	7896+31	1.5%	Normal -2.0%	Normal -1.0%	15,000	91	104	65	3,683
79.45	79.79	7921+70	7939+78	Normal -1.5%	Normal -1.5%	Normal -1.0%	18,000	96	96	65	1,808
79.79	80.32	7939+78	7967+59	1.5%	Normal -1.5%	Normal -1.0%	15,000	93	104	65	2,780
80.54	80.83	7979+25	7994+66	3.0%	Normal -2.0%	Normal -1.0%	6,500	78	92	65	1,540

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
29.57	30.20	2259+49	2292+46 bk 2290+83 ah	3.1%	Normal -1.5%	Normal -1.0%	6154	79	91	65	3,297
30.57	30.93	2310+85	2329+70 bk 2330+03 ah	4.2%	1.8%	1.8%	4400	80	85	65	1,885
31.13	31.49	2340+55	2359+40	2.8%	Normal -2.0%	Normal -1.0%	7000	80	93	65	1,885
31.77	31.96	2374+05	2384+50	4.4%	2.2%	2.2%	4000	79	84	65	1,045
32.10	32.59	2391+59	2417+72	2.8%	Normal -1.5%	Normal -1.0%	7000	81	93	65	2,613
32.99	33.54	2438+44	2467+71	3.2%	Normal -2.0%	Normal -1.0%	6000	77	90	65	2,927
33.76	34.29	2479+60	2507+45	2.5%	Normal -1.5%	Normal -1.0%	8000	83	95	65	2,785
34.54	34.65	2520+43	2526+55	Normal -2.0%	Normal -2.0%	Normal -1.0%	15000	91	91	65	612
34.70	35.02	2530+24	2547+44	3.2%	1.5%	1.0%	6000	86	90	65	1,720
35.35	35.91	2564+93	2594+49	2.1%	Normal -2.0%	Normal -1.0%	10000	86	98	65	2,956
36.31	36.49	2615+64	2625+00	4.4%	2.2%	2.2%	4000	79	84	65	936
36.74	37.94	2638+14	2701+71	Normal -1.5%	Normal -1.5%	Normal -1.0%	20000	97	97	65	6,357
38.12	39.18	2710+72	2766+78	2.1%	Normal -2.0%	Normal -1.0%	10000	86	98	65	5,606
39.49	39.77	2783+26	2798+11	4.4%	2.2%	2.2%	4000	79	84	65	1,485
40.11	40.39	2816+05	2830+88 bk 5852+86 ah	3.7%	1.5%	1.0%	5000	82	87	65	1,483
40.53	40.83	5860+09	5876+01	3.1%	Normal -1.5%	Normal -1.0%	6297	79	91	65	1,592

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
41.16	41.50	5893+28	5911+27	Normal -2.0%	Normal -2.0%	Normal -1.0%	19854	95	95	65	1,799
41.82	42.23	5928+34	5949+78	2.8%	Normal -1.5%	Normal -1.0%	7183	82	93	65	2,144
42.53	42.75	5965+54	5977+26	2.2%	Normal -2.0%	Normal -1.0%	9507	85	98	65	1,172
42.75	43.31	5977+26	6007+12	3.2%	1.5%	1.0%	5937	86	90	65	2,986
43.31	43.55	6007+12	6019+51	1.8%	Normal -2.0%	Normal -1.0%	11581	88	100	65	1,239
43.83	44.17	6034+27	6052+51	2.3%	Normal -1.5%	Normal -1.0%	8939	85	97	65	1,824
44.32	44.62	6060+23	6075+99	2.1%	Normal -1.5%	Normal -1.0%	10182	87	99	65	1,576
44.62	44.96	6075+99	6094+03	3.1%	Normal -1.5%	Normal -1.0%	6201	79	91	65	1,804
44.96	45.14	6094+03	6103+39	4.9%	2.7%	2.7%	3500	77	81	65	936
45.14	45.46	6103+39	6120+54	4.3%	2.1%	2.1%	4191	80	85	65	1,715
45.58	45.92	6127+04	6144+92	3.1%	Normal -2.0%	Normal -1.0%	6244	78	91	65	1,788
46.05	46.29	6151+70	6164+07	2.6%	Normal -2.0%	Normal -1.0%	7792	82	95	65	1,237
46.50	46.71	6175+28	6186+64	3.3%	1.5%	1.0%	5769	85	90	65	1,136
46.85	47.19	6194+12	6211+90	4.0%	1.5%	1.0%	4604	81	86	65	1,778
47.28	47.44	6216+77	6224+76	2.5%	Normal -1.5%	Normal -1.0%	8075	84	95	65	799
47.63	48.25	6235+06	6267+83	4.8%	2.6%	2.6%	3610	78	82	65	3,277

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
48.25	48.48	6267+83	6279+82	4.2%	2.0%	2.0%	4278	80	85	65	1,199
48.60	48.82	6286+15	6297+87	5.0%	2.8%	2.8%	3361	76	81	65	1,172
49.14	49.69	6314+67	6343+61	4.1%	1.8%	1.8%	4478	81	86	65	2,894
49.94	50.24	6356+78	6372+90	2.9%	Normal -1.5%	Normal -1.0%	6751	81	92	65	1,612
50.31	50.64	6376+59	6394+00	Normal -1.5%	Normal -1.5%	Normal -1.0%	20545	97	97	65	1,741
50.64	50.75	6394+00	6399+95	4.3%	2.1%	2.1%	4105	79	84	65	595
50.75	51.10	6399+95	6418+27	4.7%	2.5%	2.5%	3718	78	82	65	1,832
51.20	51.35	6423+43	6431+40	4.6%	2.4%	2.4%	3758	78	83	65	797
51.48	51.63	6438+48	6446+47	Normal -1.5%	Normal -1.5%	Normal -1.0%	20867	97	97	65	799
52.04	52.30	6468+07	6481+84	4.4%	2.2%	2.2%	4021	79	84	65	1,387
52.43	52.81	6488+73	6508+58	2.9%	Normal -1.5%	Normal -1.0%	6651	80	92	65	1,985
52.96	53.22	6517+87	6530+00 bk 28+81 ah	2.1%	Normal -1.5%	Normal -1.0%	10256	88	99	65	1,213
53.22	53.43	28+81	40+36	4.1%	1.8%	1.8%	4458	81	86	65	1,155
53.43	53.51	40+36	44+19	2.7%	Normal -1.5%	Normal -1.0%	7352	82	94	65	383
53.83	53.95	61+24	67+80bk 6369+07ah	4.4%	2.2%	2.2%	4030	79	84	65	656
53.95	54.31	6569+07	6588+21	Normal -1.5%	Normal -1.5%	Normal -1.0%	16,527	94	94	65	1,914

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
54.51	54.76	6598+50	6611+86	1.6%	Normal -2.0%	Normal -1.0%	13,000	89	102	65	1,335
54.76	54.92	6611+86	6619+93	3.8%	1.5%	1.0%	4,869	82	87	65	801
55.11	55.30	6630+04	6640+07	3.5%	1.5%	1.0%	5,500	84	89	65	1,003
55.48	55.62	6649+80	6656+92	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	712
55.62	55.98	6656+92	6676+07	1.6%	Normal -2.0%	Normal -1.0%	12,640	89	101	65	1,914
56.20	56.53	6687+83	6704+89	2.8%	Normal -1.5%	Normal -1.0%	7,000	81	93	65	1,705
56.73	57.07	6715+54	6733+58	3.5%	1.5%	1.0%	5,500	84	89	65	1,804
57.26	57.48	6743+41	6755+26	4.1%	1.8%	1.8%	4,500	81	86	65	1,184
57.66	58.14	6764+50	6790+06	1.6%	Normal -2.0%	Normal -1.0%	13,000	89	102	65	2,555
58.34	58.56	6801+08	6812+48	2.7%	Normal -1.5%	Normal -1.0%	7,253	82	93	65	1,139
58.56	58.92	6812+48	6831+82	2.1%	Normal -1.5%	Normal -1.0%	10,000	87	98	65	1,934
59.11	59.26	6841+91	6849+53	2.0%	Normal -2.0%	Normal -1.0%	11,168	87	100	65	762
59.26	59.41	6849+53	6857+77	4.1%	1.8%	1.8%	4,500	81	86	65	824
59.62	59.82	6868+29	6879+12	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,368	97	97	65	1,082
60.00	60.27	6895+98	6910+10	1.6%	Normal -2.0%	Normal -1.0%	13,374	90	102	65	1,411
60.27	60.58	6910+10	6926+28	4.4%	2.2%	2.2%	4,000	79	84	65	1,618

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
60.77	61.12	6935+69	6955+01	2.3%	Normal -1.5%	Normal -1.0%	9,000	85	97	65	1,931
61.37	61.90	6967+87	6996+03	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	2,816
62.1	62.34	7006+45	7019+28	1.6%	Normal -1.5%	Normal -1.0%	13,000	91	102	65	1,282
62.34	62.62	7019+28	7033+83	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	1,454
62.62	63.04	7033+83	7056+51	1.6%	Normal -1.5%	Normal -1.0%	13,000	91	102	65	2,268
63.24	63.46	7066+65	7078+64	3.7%	1.5%	1.0%	5,000	82	87	65	1,199
63.66	63.97	7088+68	7105+18	2.5%	Normal -1.5%	Normal -1.0%	8,000	83	95	65	1,650
64.15	64.39	7114+86	7127+65	2.8%	Normal -2.0%	Normal -1.0%	7,000	80	93	65	1,278
64.58	65.01	7138+15	7160+38	2.5%	Normal -1.5%	Normal -1.0%	8,000	83	95	65	2,223
65.01	65.34	7160+38	7177+96	2.8%	Normal -2.0%	Normal -1.0%	7,000	80	93	65	1,757
65.53	65.77	7187+46	7200+47	2.3%	Normal -1.5%	Normal -1.0%	9,000	85	97	65	1,301
66.05	66.27	7215+40	7227+00	2.1%	Normal -2.0%	Normal -1.0%	10,000	86	98	65	1,255
66.27	66.48	7227+00	7237+84	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,084
66.76	67.01	7252+79	7265+95	1.6%	Normal -1.5%	Normal -1.0%	13,000	91	102	65	1,316
67.23	67.79	7277+96	7307+84	1.9%	Normal -2.0%	Normal -1.0%	11,000	87	99	65	2,998
68.01	68.30	7318+62	7333+85	3.5%	1.5%	1.0%	5,500	84	89	65	1,522

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max Des. Std. (NJDOT)	"e" Proposed	"e" Existing	Radius Ex. & Prop. (ft)	Safe Speed		Posted Speed (mph)	Curve Length (ft)
Milepost		Station						V (Prop.) (mph)	V (Stand.) (mph)		
Start	End	Start	End								
69.22	69.50	7382+69	7396+77	2.5%	Normal -1.5%	Normal -1.0%	9,000	85	97	65	1,408
69.50	70.06	7396+77	7426+73	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	2,996
70.34	70.63	7441+28	7456+70	1.9%	Normal -2.0%	Normal -1.0%	11,000	87	99	65	1,542
70.63	70.74	7456+70	7462+53	5.0%	2.8%	2.8%	3,400	77	81	65	582
70.95	71.08	7473+63	7480+27	3.0%	Normal -1.5%	Normal -1.0%	6,500	80	92	65	663
71.08	71.30	7480+27	7492+08	Normal -1.5%	Normal -1.5%	Normal -1.0%	20,000	97	97	65	1,181
71.72	72.02	7514+21	7529+78	Normal -2.0%	Normal -2.0%	Normal -1.0%	20,000	95	95	65	1,556
72.02	72.21	7529+78	7535+85	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,007
72.38	72.93	7549+24	7577+87	Normal -1.5%	Normal -1.5%	Normal -1.0%	18,000	96	96	65	2,863
73.21	73.50	7592+84	7607+11	2.1%	Normal -2.0%	Normal -1.0%	10,000	86	98	65	1,426
73.50	73.86	7607+11	7627+01	Normal -2.0%	Normal -2.0%	Normal -1.0%	20,000	95	95	65	1,990
74.43	74.99	7657+04	7686+85	2.5%	Normal -1.5%	Normal -1.0%	8,000	83	95	65	2,980
75.38	75.56	7707+51	7716+70	2.1%	Normal -2.0%	Normal -1.0%	10,000	86	98	65	918
76.26	76.46	7753+75	7764+25	2.1%	Normal -2.0%	Normal -1.0%	10,000	86	98	65	1,050
76.46	76.70	7764+25	7776+96	1.5%	Normal -2.0%	Normal -1.0%	14,000	90	102	65	1,270
76.70	76.94	7776+96	7789+79	2.3%	Normal -2.0%	Normal -1.0%	9,000	84	97	65	1,283

TABLE 3

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
SUPERELEVATION TABULATION - SOUTHBOUND

Location				"e" max	"e"	"e"	Radius	Safe Speed		Posted	Curve
Milepost		Station		Des. Std.	Proposed	Existing	Ex. & Prop.	V (Prop.)	V (Stand.)	Speed	Length
Start	End	Start	End	(NJDOT)			(ft)	(mph)	(mph)	(mph)	(ft)
77.15	77.38	7800+69	7812+91	2.1%	Normal -1.5%	Normal -1.0%	10,000	87	98	65	1,221
77.71	78.23	7830+66	7857+91	Normal -1.5%	Normal -2.0%	Normal -1.0%	18,000	94	96	65	2,724
78.27	79.01	7860+06	7898+83	Normal -1.5%	Normal -1.5%	Normal -1.0%	15,000	93	93	65	3,876
79.44	79.77	7921+56	7939+40	Normal -2.0%	Normal -2.0%	Normal -1.0%	17,760	94	94	65	1,784
79.77	80.29	7939+40	7966+76	Normal -2.0%	Normal -2.0%	Normal -1.0%	14,760	91	91	65	2,736
80.38	80.67	7971+22	7986+62	3.0%	Normal -1.5%	Normal -1.0%	6,500	80	92	65	1,540

TABLE 4
GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
TYPICAL SECTION TABULATION
PREFERRED ALIGNMENT - NORTHBOUND

Milepost		SECTION	DIRECTION OF	WIDENING	
Start	End	NUMBER	SUPERELEVATION	INSIDE (ft.) $	OUTSIDE (ft.) $
30.17	30.45	3N	-	4	12
30.45	30.89	3S	TO WEST	4 TO 0	0 TO 24
30.89	31.03	4N		0	24 TO 30
31.03	31.36	3N		0 TO 18	0 TO 24
31.36	31.68	1N		18	0
31.68	31.99	1S	TO WEST	18	0
31.99	32.13	1N		18	0
32.13	32.51	1S	TO EAST	18	0
32.51	33.84	1N		18	0
33.84	34.17	1S	TO EAST	18	0
34.17	34.69	1N		18	0
34.69	34.93	1S	TO EAST	18	0
34.93	35.60	1N		18	0
35.60	35.83	3N		4 TO 18	0 TO 14
35.83	36.30	4N		4 TO 8	16
36.30	36.48	4S	TO WEST	4 TO 8	16
36.48	36.67	4N		4 TO 8	16
36.67	36.95	3N		4 TO 6	10
36.95	37.24	3N		4 TO 6	0
37.24	37.82	3N		6 TO 18	0
37.82	39.55	1N		18	0
39.55	39.75	3S	TO EAST	0 TO 18	0 TO 16
39.75	40.19	4N		0	16
40.19	40.37	3S	TO WEST	0 TO 4	14 TO 16
40.37	40.49	3N		4	14
40.49	40.63	3S	TO EAST	4	14
40.63	42.30	3N		0 TO 18	0 TO 14
42.30	42.78	1N		18	0
42.78	43.17	1S	TO WEST	18	0
43.17	44.59	1N		18	0
44.59	45.14	1S	TO EAST	18	0
45.14	46.70	1N		18	0
46.70	47.00	1S	TO EAST	18	0
47.00	47.57	1N		18	0
47.57	47.76	3S	TO WEST	0 TO 18	0 TO 14
47.76	48.42	4S	TO WEST	0	14
48.42	48.56	5N		0	10 TO 47
48.56	48.79	5S	TO EAST	0	47 TO 58
48.79	49.10	-	-	BRIDGE	BRIDGE
49.10	49.65	5S	TO WEST	0	58 TO 14
49.65	50.61	4N		0	14
50.61	51.09	4S	TO EAST	0	14
51.09	51.16	4N		0	14
51.16	51.29	4S	TO WEST	0	14
51.29	51.82	5N			14 TO 58
51.82	51.92	-	-	BRIDGE	BRIDGE
51.92	52.31	5N			58 TO 0
52.31	53.44	1N		18 TO 0	0
53.44	53.65	-	-	0 (Toll Plaza)	0 (Toll Plaza)

TABLE 4
GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
TYPICAL SECTION TABULATION
PREFERRED ALIGNMENT - NORTHBOUND

Milepost		SECTION	DIRECTION OF	WIDENING	
Start	End	NUMBER	SUPERELEVATION	INSIDE (ft.) $	OUTSIDE (ft.) $
53.65	53.80	1N	-	18	0
53.80	53.86	1S	TO WEST	18	0
53.86	54.66	1N	-	18	0
54.66	54.84	1S	TO WEST	18	0
54.84	56.73	1N	-	18	0
56.73	56.94	1S	TO WEST	18	0
56.94	57.12	1N		18	0
57.12	57.37	1S	TO EAST	18	0
57.37	60.24	1N	-	18	0
60.24	60.58	1S	TO WEST	18	0
60.58	60.77	1N	-	18	0
60.77	61.10	1S	TO EAST	18	0
61.10	66.24	1N	-	18	0
66.24	66.63	1S	TO WEST	18	0
66.63	68.02	1N	-	18	0
68.02	68.29	1S	TO EAST	18	0
68.29	68.54	1N	-	18	0
68.54	68.82	1S	TO WEST	18	0
68.82	68.98	-	-	0 (Toll Plaza)	0 (Toll Plaza)
68.98	69.07	1S	TO EAST	18	0
69.07	69.29	1S	TO WEST	18	0
69.29	69.48	3N	-	18 TO 8 MIN.	0 TO 10 MAX
69.48	69.64	3N	-	8 MIN	10 MAX
69.64	70.17	3N	-	8 MIN TO 18	10 MAX TO 0
70.17	72.33	1N	-	18	0
72.33	72.54	3N	-	18 TO 7	0 TO 11
72.54	73.85	3N	-	7	11
73.85	74.33	3N	-	7 TO 18	8 TO 0
74.33	75.49	1N	-	18	0
75.49	75.82	3N	-	18 TO 8	0 TO 10
75.82	76.32	2N	-	8	10
76.32	76.62	3N	-	8 TO 18	10 TO 0
76.62	80.76	1N	-	18	0

$ - For Sections showing a narrow median, *Inside Widening* represents amount of roadway widening west of Parkway and *Outside Widening* represents amount of roadway widening east of Parkway

TABLE 5
GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
TYPICAL SECTION TABULATION
PREFERRED ALIGNMENT - SOUTHBOUND

Milepost		SECTION	DIRECTION OF	WIDENING	
Start	End	NUMBER	SUPERELEVATION	INSIDE (ft.) $	OUTSIDE (ft.) $
30.20	30.57	3N	-	4	12
30.57	30.91	3S	TO WEST	4 TO 0	0 TO 24
30.91	31.09	4N		0	24 TO 30
31.09	31.50	3N		0 TO 18	0 TO 24
31.50	31.76	1N		18	0
31.76	31.96	1S	TO WEST	18	0
31.96	34.70	1N		18	0
34.70	35.02	1S	TO EAST	18	0
35.02	35.73	1N		18	0
35.73	35.85	3N		4 TO 18	0 TO 14
35.85	36.30	4N		4 to 8	16
36.30	36.48	4S	TO WEST	4 to 8	16
36.48	36.68	4N		4 to 8	16
36.68	37.19	3N		4 TO 18	0 TO 10
37.19	39.49	1N		18	0
39.49	39.77	3S	TO EAST	0 TO 18	0 TO 16
39.77	40.11	4N		0	16
40.11	40.39	3S	TO WEST	0 TO 4	14 TO 16
40.39	42.07	3N		0 TO 18	0 TO 14
42.07	42.75	1N		18	0
42.75	43.31	1S	TO WEST	18	0
43.31	44.95	1N		18	0
44.95	45.46	1S	TO EAST	18	0
45.46	46.50	1N		18	0
46.50	46.71	1S	TO EAST	18	0
46.71	46.87	1N		18	0
46.87	47.20	1S	TO EAST	18	0
47.20	47.60	1N		18	0
47.60	47.73	3S	TO WEST	0 TO 18	0 TO 14
47.73	48.45	4S	TO WEST	0	14 TO 20
48.45	48.60	5N		0	0
48.60	48.82	5S	TO EAST	0	0
48.82	49.11	-	-	BRIDGE	BRIDGE
49.11	49.69	5S	TO WEST	0	0 TO 14
49.69	50.64	4N		0	14
50.64	51.10	4S	TO EAST	0	14
51.10	51.21	4N		0	14
51.21	51.34	4S	TO WEST	0	14
51.34	51.82	5N		0	14 TO 0
51.82	52.00	-	-	BRIDGE	BRIDGE
52.00	52.04	5N			
52.04	52.30	5S	TO WEST	0 TO 18	
52.30	53.22	1N		18	0
53.22	53.43	1S	TO EAST	18	0
53.43	53.48	1N		0 TO 18	0
53.48	53.69	-	-	0 (Toll Plaza)	0 (Toll Plaza)
53.69	53.83	1N	-	18	0
53.83	53.95	1S	TO EAST	18	0
53.95	54.29	1N	-	18	0

TABLE 5
GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
TYPICAL SECTION TABULATION
PREFERRED ALIGNMENT - SOUTHBOUND

Milepost		SECTION	DIRECTION OF	WIDENING	
Start	End	NUMBER	SUPERELEVATION	INSIDE (ft.) $	OUTSIDE (ft.) $
54.29	54.53	3N	-	18 to 9	0 to 9
54.53	54.76	3N	-	9	9
54.76	54.91	3S	TO WEST	9	9
54.91	55.10	3N	-	9	9
55.10	55.29	3S	TO EAST	9	9
55.29	55.46	3N	-	9 TO 18	9 TO 0
55.46	56.72	3N	-	18	0
56.72	57.06	1S	TO WEST	18	0
57.06	57.25	1N	-	18	0
57.25	57.47	1S	TO EAST	18	0
57.47	59.25	1N	-	18	0
59.25	59.41	1S	TO WEST	18	0
59.41	60.27	1N	-	18	0
60.27	60.57	1S	TO WEST	18	0
60.57	63.23	1N	-	18	0
63.23	63.46	1S	TO WEST	18	0
63.46	68.01	1N	-	18	0
68.01	68.30	1S	TO EAST	18	0
68.30	68.62	1N	-	18	0
68.62	68.72	1S	TO EAST	18	0
68.72	68.83	1S	TO WEST	18	0
68.83	68.97	-	-	0 (Toll Plaza)	0 (Toll Plaza)
68.97	69.01	1S	TO WEST	18	0
69.01	69.04	1N	-	18	0
69.04	69.26	3N	-	18 TO 9	0 TO 9
69.26	69.50	3N	-	9	9
69.50	70.04	3N	-	9 TO 18	9 TO 0
70.04	70.63	1N	-	18	0
70.63	70.75	1S	TO WEST	18	0
70.75	75.54	1N	-	18	0
75.54	76.25	3N	-	18 TO 10	0 TO 8
76.25	76.47	3N	-	10	8
76.47	76.71	3N	-	10 TO 11	8 TO 7
76.71	76.92	3N	-	11	7
76.92	77.14	3N	-	11 TO 18	7 TO 0
77.14	80.76	IN	-	18	0

$ - For Sections showing a narrow median, *Inside Widening* represents amount of roadway widening west of Parkway and *Outside Widening* represents amount of roadway widening east of Parkway

TABLE 6

GARDEN STATE PARKWAY WIDENING INT. 30 TO 80
OVERPASS ROADWAY CREST VERTICAL CURVE TABULATIONS

Roadway Name	G1 (%)	G2 (%)	A (%)	VC Exist (ft.)	VC Des. Std. (ft.)	K Exist	K Des. Std.	Safe Speed (Exist) V (mph)	Posted Speed (mph)	Design Speed (mph)
Interchange 36	4.75	-5.90	10.65	480	320	45.1	30	34	25	30
English Creek Road	3.50	-3.50	7.00	800	770	114.3	110	41	45	50
Interchange 48	3.00	-3.00	6.00	600	180	100.0	30	42.5	25	30
Interchange 50	3.20	-2.74	5.94	400	178	67.3	30	38	25	30
Greenbush Road	4.00	-4.00	8.00	900	880	112.5	110	44	45	50
Stage Road	-4.00	-0.10	3.90	400	429	102.6	110	43	45	50
	-0.10	3.50	3.60	400	396	111.1	110	43		
North Green Street	-3.00	0.50	3.50	300	525	85.7	150	41	50	55
	0.50	3.00	2.50	300	375	120.0	150	45		
Bay Avenue	3.98	-4.06	8.04	800	884	99.5	110	42	45	50
Waretown Road	3.96	-4.06	8.02	800	1203	99.8	150	42	50	55
Birch Street	5.50	2.00	3.50	200	105	57.1	30	36	25	30
	2.00	-1.00	3.00	160	90	53.3	30	35		
	-1.00	-3.50	2.50	200	75	80.0	30	40		

APPENDIX B

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PLOT DATE FEB. 2, 2006 9:22:21 AM
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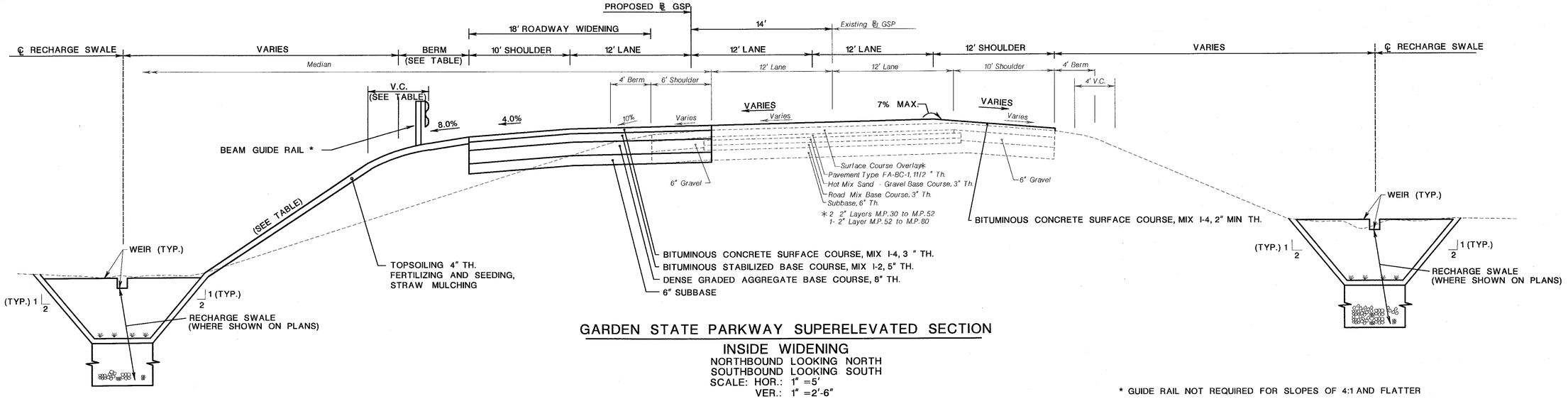
DESIGN FILE H:\NJHA\00120\SHEETS\TYP-SECT\ROADWAY\ts01.dgn

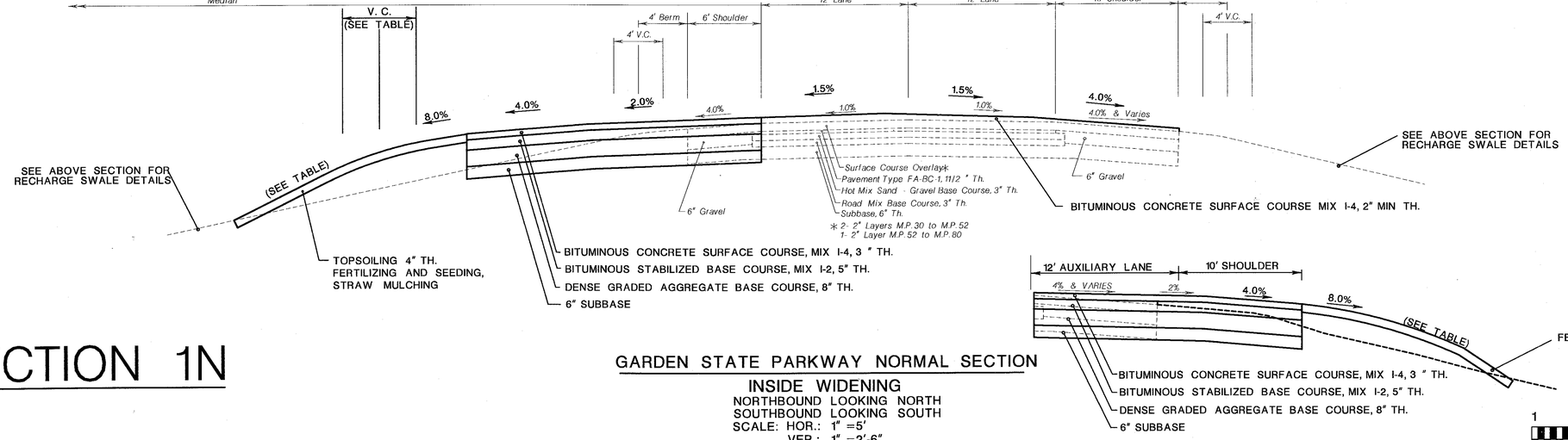


SECTION 1S

GARDEN STATE PARKWAY SUPERELEVATED SECTION

INSIDE WIDENING
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

* GUIDE RAIL NOT REQUIRED FOR SLOPES OF 4:1 AND FLATTER



SECTION 1N

GARDEN STATE PARKWAY NORMAL SECTION

INSIDE WIDENING
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
0 - 10'	4:1	3'	6'
> 10'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

NOTE:
1. *Slant Lettering Depicts Existing Conditions*
2. VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
3. PAVEMENT BOX SHOWN FOR COST ESTIMATING PURPOSES ONLY. SUBJECT TO FINAL PAVEMENT DESIGN.

REVISION	BY	CKD.	DATE

FIGURE 1

1 0 1 2 3
ORIGINAL SIZE IN INCHES

NEW JERSEY TURNPIKE AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

T&M ASSOCIATES
11 TINDALL ROAD
MIDDLETOWN, N.J. 07748

SCALE: AS SHOWN
DATE: February 2006

A
199

CADD DATA
OPERATOR
PLOT DATE 08 AUG 102 11:17:20
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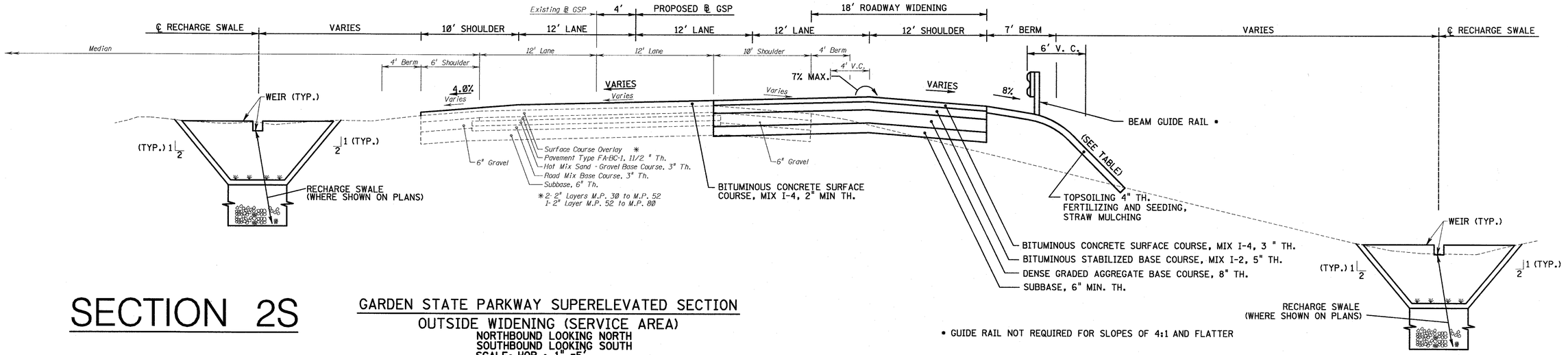
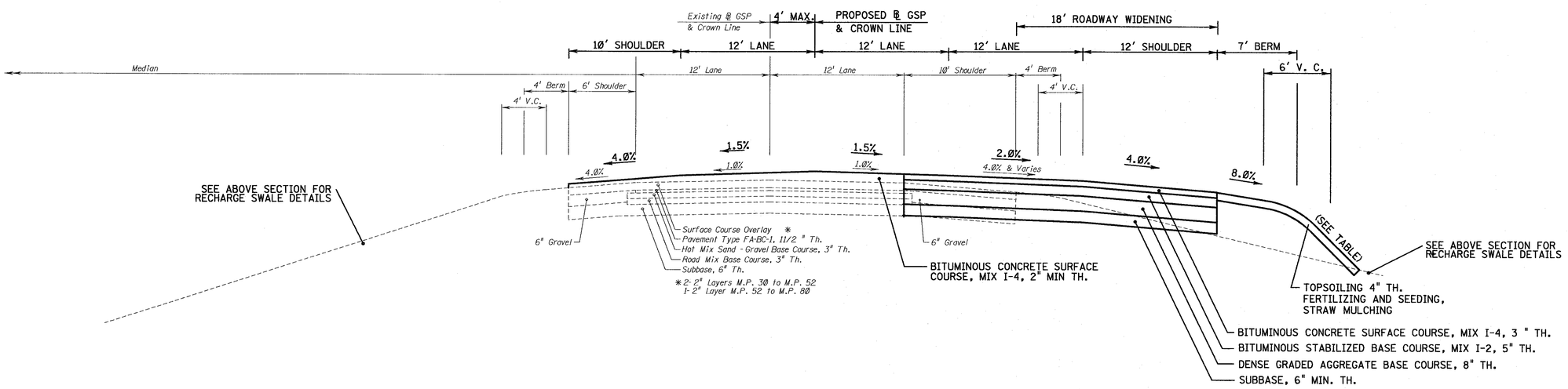


SECTION 2S

GARDEN STATE PARKWAY SUPERELEVATED SECTION

OUTSIDE WIDENING (SERVICE AREA)
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

• GUIDE RAIL NOT REQUIRED FOR SLOPES OF 4:1 AND FLATTER



SECTION 2N

GARDEN STATE PARKWAY NORMAL SECTION

OUTSIDE WIDENING (SERVICE AREA)
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
Ø - 10'	4:1	3'	6'
> 10'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

NOTE:
1. *Slant Lettering Depicts Existing Conditions*
2. VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
3. PAVEMENT BOX SHOWN FOR COST ESTIMATING PURPOSES ONLY. SUBJECT TO FINAL PAVEMENT DESIGN.

FIGURE 2

1 Ø 1 2 3
ORIGINAL SIZE IN INCHES

REVISION	BY	CKD.	DATE

NEW JERSEY HIGHWAY AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

T&M ASSOCIATES 11 TINDALL ROAD MIDDLETOWN, N.J. 07748

SCALE: AS SHOWN
DATE: APRIL, 2002
Frederick J. Hofmann, N.J.P.E. # 17253

199

CADD DATA
OPERATOR
PLOT DATE 08 AUG 102 13:56:00
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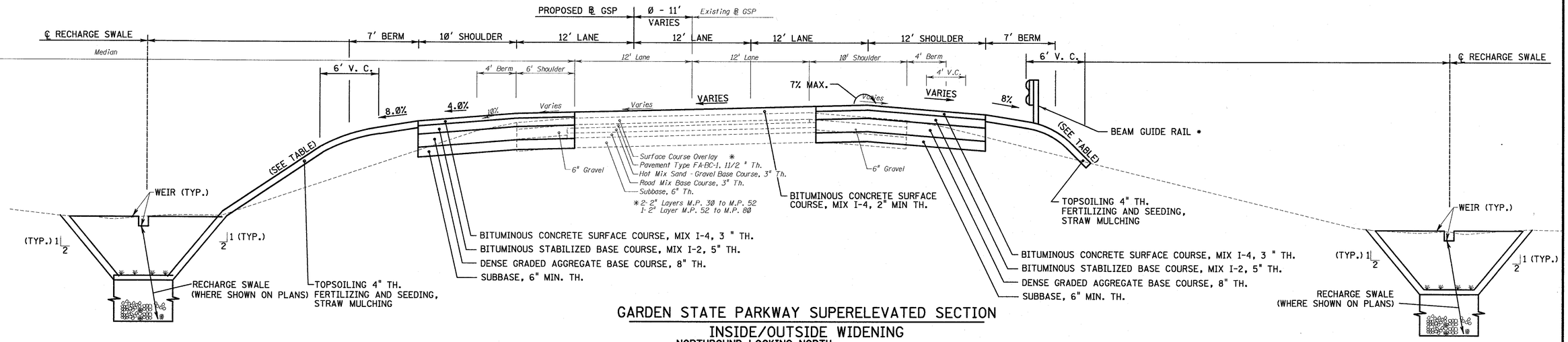
DESIGN FILE H:\NJHA\00120\SHEETS\TYP-SECT\ROADWAY\ts03.dgn

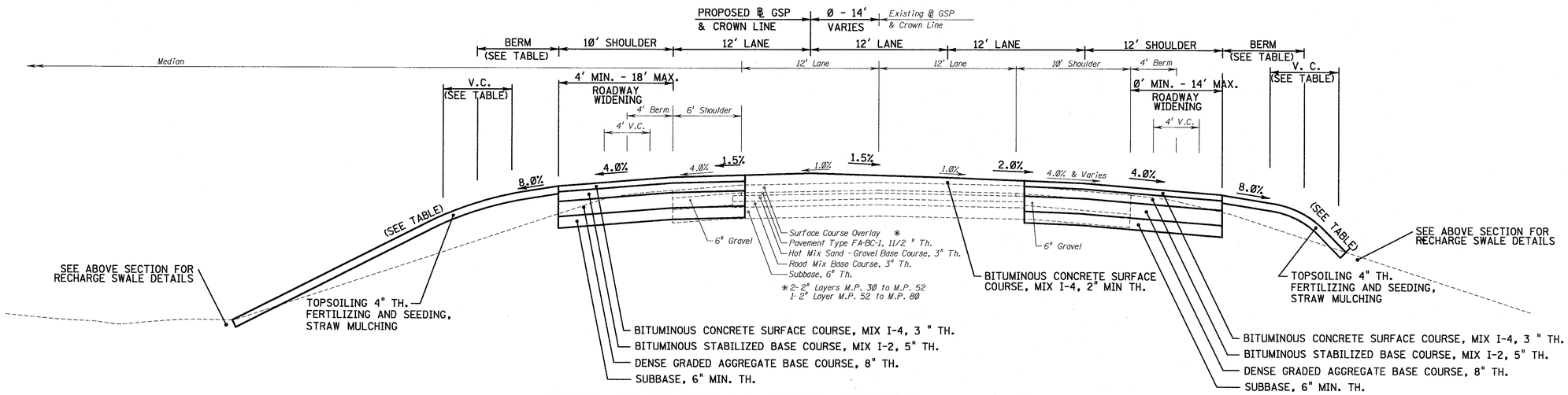


GARDEN STATE PARKWAY SUPERELEVATED SECTION

INSIDE/OUTSIDE WIDENING
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

• GUIDE RAIL NOT REQUIRED FOR SLOPES OF 4:1 AND FLATTER

SECTION 3S



GARDEN STATE PARKWAY NORMAL SECTION

INSIDE/OUTSIDE WIDENING
NORTHBOUND LOOKING NORTH
SOUTHBOUND LOOKING SOUTH
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SECTION 3N

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
Ø - 10'	4:1	3'	6'
> 10'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

NOTE:
1. *Slant Lettering Depicts Existing Conditions*
2. VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
3. PAVEMENT BOX SHOWN FOR COST ESTIMATING PURPOSES ONLY. SUBJECT TO FINAL PAVEMENT DESIGN.

REVISION	BY	CKD.	DATE

FIGURE 3

1 Ø 1 2 3
ORIGINAL SIZE IN INCHES

NEW JERSEY HIGHWAY AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

TM ASSOCIATES
11 TINDALL ROAD
MIDDLETOWN, N.J. 07748

SCALE: AS SHOWN
DATE: APRIL, 2002

Frederick J. Hofmann, N.J.P.E. # 17253

CADD DATA	
OPERATOR	11:20:27
PLOT DATE	08 AUG 102
PEN TABLE	njha-pen.tbl
DESIGN FILE	h:\njha\00120\sheets\typ-sect\roadway\tmts04.dgn

GARDEN STATE PARKWAY NORMAL SECTION
OUTSIDE SYMMETRICAL WIDENING
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SECTION 4N

GARDEN STATE PARKWAY SUPERELEVATED SECTION
OUTSIDE SYMMETRICAL WIDENING
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SECTION 4S

FIGURE 4

1 Ø 1 2 3
ORIGINAL SIZE IN INCHES

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
Ø - 1Ø'	4:1	3'	6'
> 1Ø'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

WIDTHS AT PATCONG CREEK MP 31.Ø

* 12'-Ø"
** 31'-9"
*** 1'-6"

SEE BRIDGE SKETCH

NOTES:
Slant Lettering Depicts Existing Conditions
VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
PAVEMENT BOX FOR ESTIMATING PURPOSE ONLY
SUBJECT TO FINAL PAVEMENT DESIGN.

DES. BY	DR. BY	TR. BY	EST. BY
CHK. BY	CHK. BY	CHK. BY	CHK. BY

REVISION	BY	CKD.	DATE

NEW JERSEY HIGHWAY AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

T&M ASSOCIATES
11 TINDALL ROAD
MIDDLETOWN, N.J. 07748

SCALE: AS SHOWN
DATE: APRIL, 2002
Frederick J. Hofmann, N.J.P.E. # 17253

199

CADD DATA
OPERATOR
PLOT DATE 08 AUG 102 11:21:23
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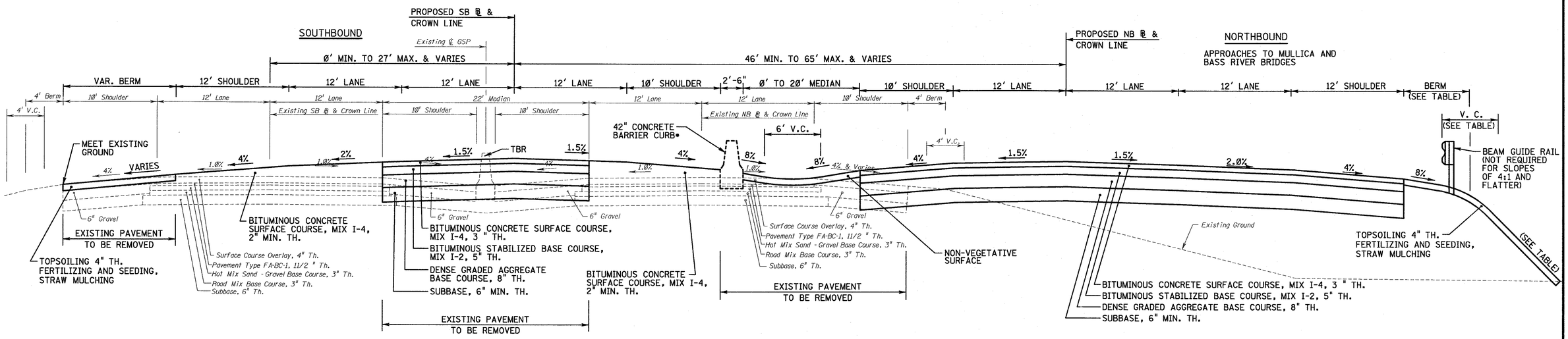
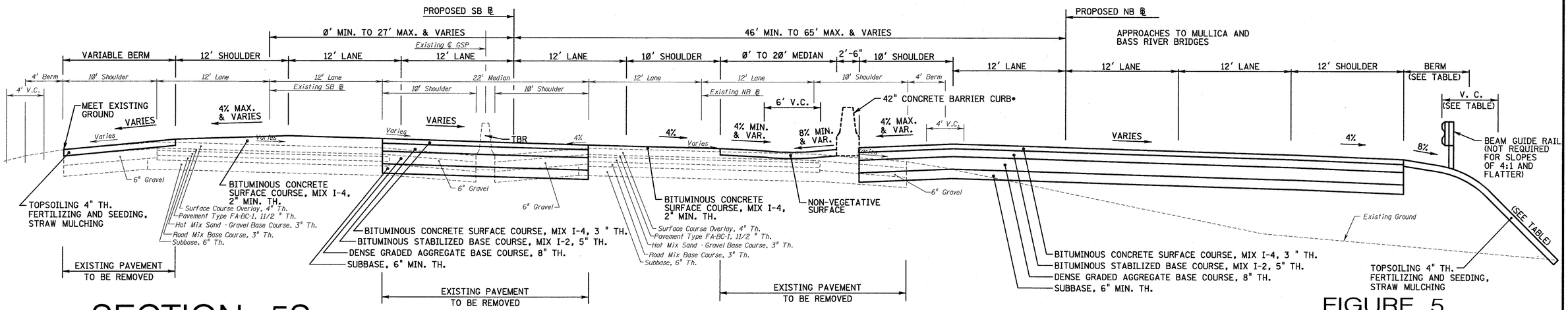


SECTION 5N

GARDEN STATE PARKWAY NORMAL SECTION
WIDENING TO THE EAST
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"



SECTION 5S

GARDEN STATE PARKWAY SUPERELEVATED SECTION
WIDENING TO THE EAST
SCALE: HOR.: 1" =5'
VER.: 1" =2'-6"

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
Ø - 10'	4:1	3'	6'
> 10'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

NOTES:
Slant Lettering Depicts Existing Conditions
VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
PAVEMENT BOX FOR ESTIMATING PURPOSE ONLY
SUBJECT TO FINAL PAVEMENT DESIGN.
• LOCATION OF 42" CONCRETE BARRIER CURB WILL BE AS SHOWN ON PRLIMINARY PLANS.

FIGURE 5

1 Ø 1 2 3
ORIGINAL SIZE IN INCHES

DES. BY CHK. BY
DR. BY CHK. BY
TR. BY CHK. BY
EST. BY CHK. BY

REVISION	BY	CKD.	DATE

NEW JERSEY HIGHWAY AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

T&M ASSOCIATES 11 TINDALL ROAD MIDDLETOWN, N.J. 07748

SCALE: AS SHOWN
DATE: APRIL, 2002
Frederick J. Hofmann, N.J.P.E. # 17253

CADD DATA
OPERATOR
PLOT DATE 08 AUG 102 11:22:05
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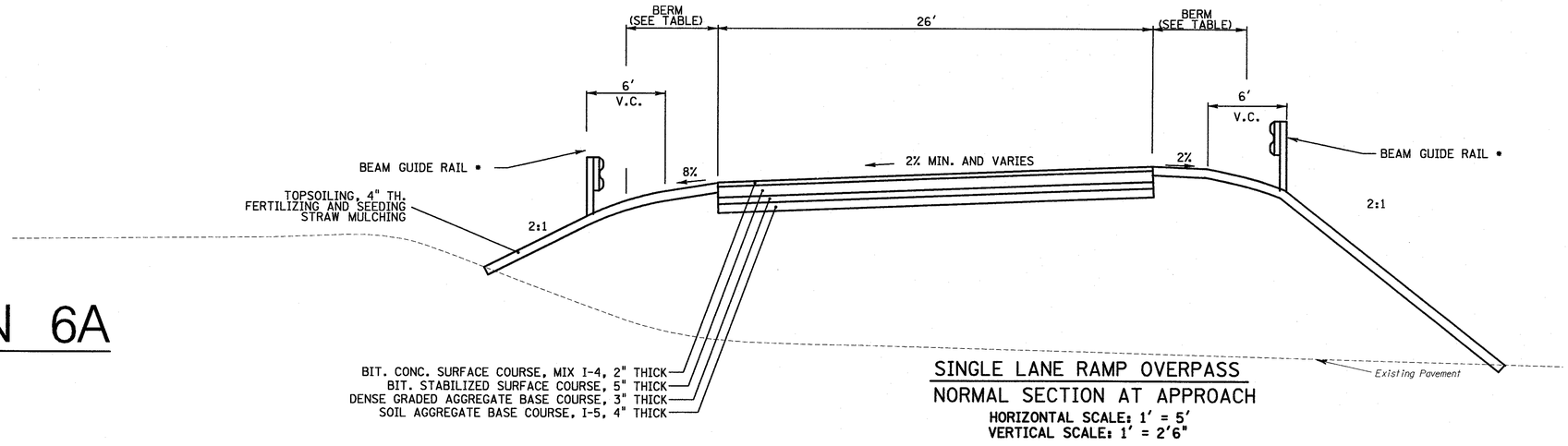
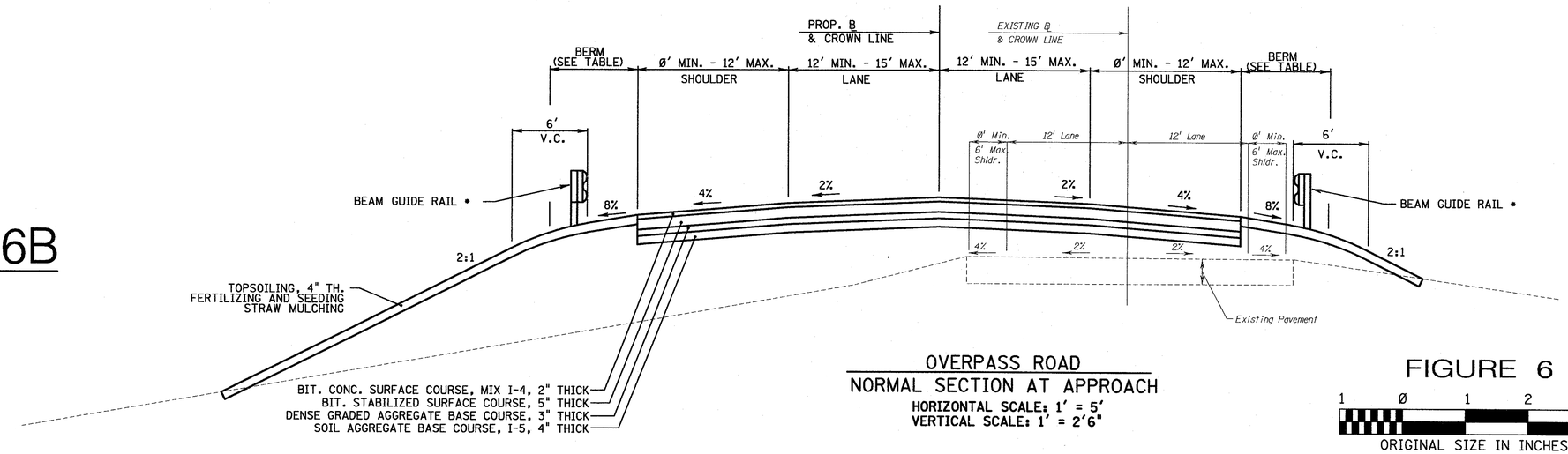
DESIGN FILE h:\nhq\00120\sheets\typ-sect\roadway\ts06.dgn

SECTION 6A



SINGLE LANE RAMP OVERPASS
NORMAL SECTION AT APPROACH
HORIZONTAL SCALE: 1' = 5'
VERTICAL SCALE: 1' = 2'6"

SECTION 6B



OVERPASS ROAD
NORMAL SECTION AT APPROACH
HORIZONTAL SCALE: 1' = 5'
VERTICAL SCALE: 1' = 2'6"

• GUIDE RAIL NOT REQUIRED FOR SLOPES OF 4:1 AND FLATTER

SLOPE TABLE

FILL HEIGHT	SLOPE	BERM WIDTH	V.C.
Ø - 1Ø'	4:1	3'	6'
> 1Ø'	2:1	7'	6'
IN WETLANDS	1 1/2:1	4'	4'
CUT	2:1	7'	6'

NOTE:
1. *Slant Lettering Depicts Existing Conditions*
2. VERTICAL LETTERING DEPICTS PROPOSED CONDITIONS
3. PAVEMENT BOX SHOWN FOR COST ESTIMATING PURPOSES ONLY. SUBJECT TO FINAL PAVEMENT DESIGN.

REVISION	BY	CKD.	DATE

FIGURE 6

1 Ø 1 2 3
ORIGINAL SIZE IN INCHES

NEW JERSEY HIGHWAY AUTHORITY
GARDEN STATE PARKWAY
CONTRACT NO. 133-572D
GSP WIDENING M.P. 30 TO M.P. 80

TYPICAL SECTIONS

T&M ASSOCIATES 11 TINDALL ROAD MIDDLETOWN, N.J. 07748
Frederick J. Hofmann, N.J.P.E. # 17253

SCALE: AS SHOWN
DATE: APRIL, 2002